

DETAILED ACTION

1. Claims 38-43, 46-51, 54-59, 61-66, and 68-73 are allowed.

Examiner's Statement of Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

3. Ackaouy et al. (U.S. Patent No. 7,171,469) teaches an apparatus for caching data in a network, with the apparatus including a proxy cache configured to receive request for an object from a client and to fetch data blocks from a server. The proxy cache may be configured to cache the data blocks in a hierarchical relationship within the object. The object may be, for example, a data file, a directory, or a part of a data file such as a data block. The data blocks that are cached in the proxy cache define an active data set which is based upon a request from a client (see at least col. 1:55-67).

4. Lister et al. (U.S. Patent No. 6,167,446) teaches a source file server and a client workstation communicate with each other via a NI Cache (i.e. proxy) (see at least FIG.

- 1). The proxy receives and responds to request from client workstation for access to data from a file stored on the source file server. The proxy attempts to retrieve data from a cached image of the file, or a cached image of a portion of the file, that is present in a cache which is included in the proxy. If the requested file data is not present at the proxy, a request for the missing file data to the source file server is transmitted to obtain the file data and transmit the obtain file data to the client workstation (see at least col. 7:13-55).

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5. Ackaouy and Lister taken alone or in combination fails to teach “providing a repository at said server device for storing multiple versions of the same file and meta data comprising information about the organization and properties of said files into a versioned system, said server device controlling all changes to data in said repository; and said particular proxy device forwarding a lock request to said server device on behalf of said one of said clients, and said server device receiving said lock request, whereby said lock request is for said desired file version and, if granted by said server device, permitting only said one of said clients to modify said desired file version” as recited in the independent claims.

6. Therefore, it would not have been obvious to combine Ackaouy and lister and/or with other prior arts to obtain the claimed invention.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Examiner's Amendment

8. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

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9. Authorization for this examiner's amendment was given in a telephone interview with Brett Slaney (Reg. No. on 58,772). The examiner's amendment is necessitated to further clarify the claimed invention.

10. Claims 38, 46, 54-59, and 61 have been amended below.

11. Claims 44, 45, 52, 53, 60, and 67 are cancelled.

12. Claims 68-73 are new.

38. (currently amended) A method for retrieving data related to versions of files organized in a configuration, said method comprising:

~~-arranging a proxy device between a server device and one or more proxy devices so that each of said one or more proxy devices are between said server device and one or more clients;~~

~~-providing a repository at said server device for storing multiple versions of the same file and meta data comprising information about the organization and properties of said files into a versioned system, said server device controlling all changes to data in said repository;~~

~~-providing a server cache at said server device and a proxy cache at said proxy device at each of said one or more proxy devices for storing bulk data and meta data related to said versions of files, said bulk data comprising said versions themselves, said meta data comprising said information about the organization and properties of said files into a versioned system;~~

~~-registering said proxy cache at said server device respective proxy caches for said one or more proxy devices with a list of listeners maintained by said server device in order to update said proxy caches when changes are made at said server device to said data related to versions of files, said changes being controlled by only said server device;~~

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-enabling said server device to transmit updates to said respective proxy caches and enabling said ~~proxy cache~~ respective proxy caches to receive an update updates from said server device, said updates made according to changes made to said data related to versions of files according to what is currently stored by a respective one of said proxy caches to synchronize said proxy caches;

-enabling said ~~proxy cache~~ said respective proxy caches to be updated using said updates to thereby synchronize said ~~proxy cache~~ said respective proxy caches with said server device;

-enabling said ~~proxy device~~ said one or more proxy devices to provide said updates to said one or more clients for synchronizing one or more client-based caches;

-a particular one of said one or more proxy devices receiving a request from one of said clients for one or more desired file versions or a set of meta data;

-if said one or more desired file versions or set of meta data is in said particular proxy device's proxy cache, returning said one or more desired file versions or set of meta data to said one of said clients; [[and]]

-if said one or more desired file versions or set of meta data is not in said particular proxy device's proxy cache, said particular proxy device forwarding said request to said server device, said server device obtaining said one or more desired file versions or set of meta data to said repository, and returning said one or more desired file versions or set of meta data to said particular proxy device, said particular proxy device obtaining from said server device said one or more desired file versions or set of meta data, and returning to said one of said clients said one or more desired file versions or set of meta data; and

-said particular proxy device forwarding a lock request to said server device on behalf of said one of said clients, and said server device receiving said lock request, whereby said lock request is for said desired file version and, if granted by said server device, permitting only said one of said clients to modify said desired file version.

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46. (currently amended) A method for retrieving data related to versions of files organized in a configuration, said method comprising:

- arranging a server device in communication with one or more proxy devices arranged to be between said server device and one or more clients, each of said one or more proxy device comprising a proxy cache;

- providing a repository at said server device for storing multiple versions of the same file and meta data comprising information about the organization and properties of said files into a versioned system, said server device controlling all changes to data in said repository;

- providing a server cache at said server device for storing bulk data and meta data related to said versions of files, said bulk data comprising said versions themselves, said meta data comprising said information about the organization and properties of said files into a versioned system;

- registering at said server device respective proxy caches for said one or more proxy devices with a list of listeners maintained by said server device in order to update said proxy caches when changes are made at said server device to said data related to versions of files, said changes being controlled by only said server device;

- enabling said server device to transmit updates to said respective proxy caches according to changes made to said data related to versions of files according to what is currently stored by a respective one of said proxy caches to synchronize said proxy caches;

- receiving a request from one of said proxy devices on behalf of one of said clients for one or more desired file versions or a set of meta data when said request cannot be fulfilled by said one of said proxy devices;

- if said one or more desired file versions or set of meta data is in said server cache, returning said one or more desired file versions or set of meta data to said one of said proxy devices; and

-if said one or more desired file versions or set of meta data is not in said server cache, said server device obtaining said one or more desired file versions or set of meta data using said repository, and returning said one or more desired file versions or set of meta data using said one of said proxy devices to enable said proxy device to fulfill said request made by said one of said clients; and

-said server device receiving a lock request from said one of said proxy device on behalf of said one of said clients, said lock request for said desired file version and, if granted by said server device, permitting only said one of said clients to modify said desired file version.

54. (currently amended) A [[system]] computer readable medium comprising computer executable instructions for retrieving data related to versions of files organized in a configuration, said [[system]] computer readable medium comprising instructions for:

~~——— a proxy device positioned between a said proxy device comprising a processor and a proxy cache for storing bulk data and meta data related to said versions of files, said bulk data comprising said versions themselves, said meta data comprising information about the organization and properties of said files into a versioned system, said proxy cache registered with a list of listeners maintained by said server device in order to update said proxy cache when changes are made at said server device to said data related to versions of files, said changes being controlled by only said server device, said proxy cache configured to receive an update from said server device according to changes made to said data related to versions of files, said proxy cache configured to be updated using said update to thereby synchronize said proxy cache with said server device, said proxy device configured to provide said update to said one or more clients for synchronizing one or more client-based caches, said proxy device configured to receive a request from one of said clients for one or more desired file versions or a set of meta data, and said processor configured such that:~~

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~~_____ if said one or more desired file versions or set of meta data is in said proxy cache, said proxy device returns said one or more desired file versions or set of meta data to said one of said clients; and~~

~~_____ if said one or more desired file versions or set of meta data is not in said proxy cache, said proxy device forwards said request to said server device, obtains from said server device said one or more desired file versions or set of meta data, and returns to said one of said clients said one or more desired file versions or set of meta data.~~

_____ -arranging a server device and one or more proxy devices so that each of said one or more proxy devices are between said server device and one or more clients;

_____ - providing a repository at said server device for storing multiple versions of the same file and meta data comprising information about the organization and properties of said files into a versioned system, said server device controlling all changes to data in said repository;

_____ -providing a server cache at said server device and a proxy cache at each of said one or more proxy devices for storing bulk data and meta data related to said versions of files, said bulk data comprising said versions themselves, said meta data comprising said information about the organization and properties of said files into a versioned system;

_____ -registering at said server device respective proxy caches for said one or more proxy devices with a list of listeners maintained by said server device in order to update said proxy caches when changes are made at said server device to said data related to versions of files, said changes being controlled by only said server device;

_____ -enabling said server device to transmit updates to said respective proxy caches and enabling said respective proxy caches to receive updates from said server device, said updates made according to changes made to said data related to versions of files according to what is currently stored by a respective one of said proxy caches to synchronize said proxy caches;

_____ -enabling said respective proxy caches to be updated using said updates to thereby synchronize said respective proxy caches with said server device;

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-enabling said one or more proxy devices to provide said updates to said one or more clients for synchronizing one or more client-based caches;

-a particular one of said one or more proxy devices receiving a request from one of said clients for one or more desired file versions or a set of meta data;

-if said one or more desired file versions or set of meta data is in said particular proxy device's proxy cache, returning said one or more desired file versions or set of meta data to said one of said clients;

-if said one or more desired file versions or set of meta data is not in said particular proxy device's proxy cache, said particular proxy device forwarding said request to said server device, said server device obtaining said one or more desired file versions or set of meta data to said repository, and returning said one or more desired file versions or set of meta data to said particular proxy device, said particular proxy device obtaining from said server device said one or more desired file versions or set of meta data, and returning to said one of said clients said one or more desired file versions or set of meta data; and

-said particular proxy device forwarding a lock request to said server device on behalf of said one of said clients, and said server device receiving said lock request, whereby said lock request is for said desired file version and, if granted by said server device, permitting only said one of said clients to modify said desired file version.

55. (currently amended) The [[system]] computer readable medium in claim 54 further comprising instructions for said proxy device [[able]] to present a credential to said server device to authenticate said proxy device before said proxy cache is enabled to receive said update from said server device.

56. (currently amended) The [[system]] computer readable medium in claim 54 wherein upon receiving said request from said one of said clients for said desired file version or set of meta data, said proxy cache is able to examine said set of meta data to

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determine if said one of said clients has permission to access said desired file version or set of meta data.

57. (currently amended) The [[system]] computer readable medium in claim 54 wherein said configuration of said data related to versions of files comprises a tree structure, said tree structure comprising a plurality of successive versions and one or more alternate revisions.

58. (currently amended) The [[system]] computer readable medium in claim 57 wherein one or more changes between any two versions of files are stored as one or more deltas, and said desired file version is reconstructed by said server device using said one or more deltas.

59. (currently amended) The [[system]] computer readable medium in claim 54 wherein each of said one or more clients has a sandbox for locally storing said data related to versions of files.

61. (currently amended) A system for retrieving data related to versions of files organized in a configuration, said system comprising:

-a server device in communication with one or more proxy devices arranged in between said server device and one or more clients, each of said one or more proxy devices comprising a proxy cache, said server device comprising a processor and a repository for storing multiple versions of the same file and meta data comprising information about the organization and properties of said files into a versioned system, said server device controlling all changes to data in said repository, said server device also comprising a server cache for storing bulk data and meta data related to said versions of files, said bulk data comprising said versions themselves, said meta data comprising information about the organization and properties of said files into a versioned system; said server device registering respective proxy caches for said one

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or more proxy devices with a list of listeners maintained by said server device in order to update said proxy caches when changes are made at said server device to said data related to versions of files, said changes being controlled by only said server device; said server device configured to transmit updates to said respective proxy caches according to changes made to said data related to versions of files according to what is currently stored by a respective one of said proxy caches to synchronize said proxy caches; said server device configured for receiving a request from one of said proxy devices on behalf of one of said clients for one or more desired file versions or a set of meta data when said request cannot be fulfilled by said one of said proxy devices; and said processor configured such that:

- if said one or more desired file versions or set of meta data is in said server cache, returning said one or more desired file versions or set of meta data to said one of said proxy devices; [[and]]

- if said one or more desired file versions or set of meta data is not in said server cache, said server device obtaining said one or more desired file versions or set of meta data using said repository, and returning said one or more desired file versions or set of meta data using to said one of said proxy devices to enable said proxy device to fulfill said request made by said one of said clients; and

- wherein said server device is further configured to receive a lock request from said one of said proxy device on behalf of said one of said clients, said lock request for said desired file version and, if granted by said server device, permitting only said one of said clients to modify said desired file version.

68.(new) A computer readable medium comprising computer executable instructions for retrieving data related to versions of files organized in a configuration, said computer executable instructions comprising instructions for:

- arranging a server device in communication with one or more proxy devices arranged to be between said server device and one or more clients, each of said one or more proxy device comprising a proxy cache;

- providing a repository at said server device for storing multiple versions of the same file and meta data comprising information about the organization and properties of said files into a versioned system, said server device controlling all changes to data in said repository;

- providing a server cache at said server device for storing bulk data and meta data related to said versions of files, said bulk data comprising said versions themselves, said meta data comprising said information about the organization and properties of said files into a versioned system;

- registering at said server device respective proxy caches for said one or more proxy devices with a list of listeners maintained by said server device in order to update said proxy caches when changes are made at said server device to said data related to versions of files, said changes being controlled by only said server device;

- enabling said server device to transmit updates to said respective proxy caches according to changes made to said data related to versions of files according to what is currently stored by a respective one of said proxy caches to synchronize said proxy caches;

- receiving a request from one of said proxy devices on behalf of one of said clients for one or more desired file versions or a set of meta data when said request cannot be fulfilled by said one of said proxy devices;

- if said one or more desired file versions or set of meta data is in said server cache, returning said one or more desired file versions or set of meta data to said one of said proxy devices;

- if said one or more desired file versions or set of meta data is not in said server cache, said server device obtaining said one or more desired file versions or set of meta data using said repository, and returning said one or more desired file versions or set of meta data using ~~to~~ said one of said proxy devices to enable said proxy device to fulfill said request made by said one of said clients; and

- said server device receiving a lock request from said one of said proxy device on behalf of said one of said clients, said lock request for said desired file version and, if

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granted by said server device, permitting only said one of said clients to modify said desired file version.

69. (new) The computer readable medium in claim 68 further comprising computer executable instructions for said proxy device presenting a credential to said server device to authenticate said proxy device before said proxy cache is enabled to receive said update from said server device.

70. (new) The computer readable medium in claim 68 wherein upon said proxy device receiving said request from said one of said clients for said desired file version or set of meta data, said proxy cache examines said set of meta data to determine if said one of said clients has permission to access said desired file version or set of meta data.

71. (new) The computer readable medium in claim 68 wherein said configuration of said data related to versions of files comprises a tree structure, said tree structure comprising a plurality of successive versions and one or more alternate revisions.

72. (new) The computer readable medium in claim 71 wherein one or more changes between any two versions of files are stored as one or more deltas and said server device reconstructing said desired file version using said one or more deltas when obtaining said desired file version from said repository.

73. (new) The computer readable medium in claim 68 wherein each of said one or more clients has a sandbox for locally storing said data related to versions of files.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571)

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270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN

10/5/2009

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191